



THE UNIVERSITY *of* EDINBURGH

Edinburgh Research Explorer

Feedback for coaches

Citation for published version:

Nash, C, Sproule, J & Horton, P 2017, 'Feedback for coaches: Who coaches the coach?', *International Journal of Sports Science & Coaching*, vol. 12, no. 1, pp. 92-102.
<https://doi.org/10.1177/1747954116684390>

Digital Object Identifier (DOI):

[10.1177/1747954116684390](https://doi.org/10.1177/1747954116684390)

Link:

[Link to publication record in Edinburgh Research Explorer](#)

Document Version:

Peer reviewed version

Published In:

International Journal of Sports Science & Coaching

Publisher Rights Statement:

Christine Nash, John Sproule, Peter Horton, Feedback for coaches: Who coaches the coach?, International Journal of Sports Science & Coaching (Vol 12, Issue 1) pp. 92 - 102. Copyright © [2017] (Sage). Reprinted by permission of SAGE Publications.

General rights

Copyright for the publications made accessible via the Edinburgh Research Explorer is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

The University of Edinburgh has made every reasonable effort to ensure that Edinburgh Research Explorer content complies with UK legislation. If you believe that the public display of this file breaches copyright please contact openaccess@ed.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.



Running Head: Who coaches the coach?

Feedback for Coaches: Who coaches the coach?

Christine Nash

John Sproule

University of Edinburgh

Peter Horton

The Cairns Institute, James Cook University

Mailing address: Christine Nash, Institute of Sport, PE & Health Sciences, St Leonard's Land,

Holyrood Road, Edinburgh

Telephone number: 0131 651 6581

Abstract

The aim of this study was to investigate the feedback mechanisms that sport coaches utilized to enhance their coaching practice at various stages of their careers. Sport coaches (n=21) were interviewed in-depth with the resulting information being analyzed using HyperRESEARCH qualitative data analysis software package. Results suggested four distinct dimensions that characterized the sources of feedback used by coaches: networks; players/participants; critical thinking skills; and support systems. Those more experienced coaches with established networks of like-minded coaches seemed to be more open to constructive feedback. Similarly, novice coaches appeared to accept feedback from non-reliable sources in lieu of more informed sources. A distinctive emerging feature was the lack of formal feedback mechanisms within groups of coaches at all levels of qualification.

Feedback for Coaches: Who coaches the coach?

Sports coaches are expected to be able to deliver constructive and informative feedback to their athletes and the communication process is central to effective coaching [1]. One of the sport coach's key roles is to provide the best possible feedback that allows athletes and teams to learn and consequently improve performance. Most often this communication is verbal however there are a number of methods of transmission including visual demonstration and triggering reflective or critical thought. The literature is replete with research that has investigated such parameters as when, how, how frequently and what type of feedback is being used [c.f.: 2; 3; 4]. 'Feedback' is a term used in many domains of human interaction with differing emphasis but usually includes the transmission of evaluative or corrective information concerning an action [5]. Coaches are thus judged by their charges on the basis of their ability to deliver 'appropriate' feedback, which is intended to manifest itself in the improved performances of the coaches' athletes or teams [6]. However, how coaches themselves are given and receive feedback that positively informs their practice and facilitates their development as coaches is still unclear. The term 'feedback' has many different connotations in sport; in this study the definition will be taken from educational literature and will be defined as 'information that helps students troubleshoot their own performance and self-correct: that is, it helps students take action to reduce the discrepancy between their intentions and the resulting effects' [7, p.208].

It has been shown that in some instances more experienced or successful coaches who are considered to be effective at providing feedback may, in fact, have limited experience of receiving and using such developmental information themselves [8]. Are coaches encouraged to build

1 techniques and develop strategies from appropriate feedback to enhance strengths and improve
 2 weaknesses and if so what are these feedback sources? Recognised sources have customarily been
 3 coach education courses, mentors and reflective practices [9; 10; 11]. More recently, analysis
 4 software has permitted more objective examination of coaching effectiveness, generating feedback
 5 in a number of key areas, for example, communication strategies [12; 13]. Furthermore, coaches
 6 have been making use of the Internet for self-learning and feedback on practice; an example
 7 includes accessing information on recent research using Facebook [14; 15]. These innovations
 8 have, to a certain extent added to the sources available for early career coaches to gain information,
 9 and therefore, feedback on their practice. However, King [16] suggests that the process of
 10 constructing new knowledge or the process of transforming previous knowledge into new formats
 11 is more productively enhanced through peer interaction. According to experienced coaches,
 12 learning from successful coaches is still considered to be an effective method of gaining feedback
 13 and developing expertise [17]. This practice is however, not without fault.

14
 15 Research has shown that although sound feedback generally improves performance, this
 16 does not occur in every situation [18]. Much is dependent on the feedback provided to learners, in
 17 this case, sport coaches, and the nature and the extent of their own motivation to develop expertise
 18 [19]. Educational research has highlighted the importance of three areas: the nature of the
 19 feedback, its timing, and the feedback provider, although specific features of effective feedback
 20 have been largely disputed [20; 21; 22]. In a complex task such as sport coaching, the conditions
 21 that influence feedback effectiveness are likely to be correspondingly complex. First, when
 22 considering the nature of the feedback, the purpose must be considered to be the development of
 23 coaching knowledge so the feedback must be sufficiently individualized and detailed to encourage

1 learning because as Chi et al. [23] note, feedback without explanations can improve coaching
2 practice in the short term but will not engender long-term changes.

3
4 Research into the timing of feedback suggests that, in verbal learning, feedback should be
5 immediate for maximum effect: however, within a practical situation, such as sport coaching, the
6 situation is not so well defined [24, 25, 26, 27]. Within sport coaching it is not always possible or
7 appropriate for coaches to receive immediate feedback and, given that many coaches feel isolated,
8 they may not receive any regular or structured information regarding their coaching practice [28,
9 29]. Finally, the feedback provided to coaches tends to be by interaction with other, more
10 experienced coaches and this isolation would also appear to limit coaches' access to such
11 information [30].

12
13 Despite recent revisions to coach education courses (e.g., in Canada and the UK) that do
14 encourage feedback from course tutors, assessors and coaching peers, some still appear to be
15 lacking in substantive feedback to coaches [1]. Critical thinking and reflection are part of some
16 formal coach education programmes offered in educational institutions and are also becoming
17 more prevalent within sports organisations practices [28, 1, 31]. Critical thinking and reflection
18 could be considered valuable tools for coaches, especially those who are isolated as mentioned
19 above.

20
21 In the elite sporting context, the most meaningful communication process, particularly in
22 long-term relationships, is that which emerges between coach and athlete. This relationship
23 prospers on communication and trust, which is a prerequisite for good dialogue and mutual

feedback. However, this is not the situation in all instances [32]. A recent feature of elite sport is the growing complexity of the coaching process and the increasing level of democratization in the coach-athlete relationship. It is widely believed that at the elite level in both individual and team sports an essential dynamic of the feedback configuration is the establishment of an ‘expertise hub’ made up of senior or experienced players and all members of the coaching and the support-team [33]. These hubs can function as two-way exchanges on both athletes’ and coaches’ performance and therefore provide a good source of feedback for coaches and athletes but also the members of the full support team.

This study aimed to investigate the methods, both formal and informal by which coaches gained feedback about their coaching practice. It identified the various processes by which coaches both acquired and utilized information at various stages of their coaching careers. A qualitative methodology was deemed to be the most appropriate means of gathering in-depth data about communication, interactions, discourse on the coaching process, and most importantly, the perceptions of these coaches about their feedback opportunities within their current coaching environment.

Methods

Participants

The twenty-one participants (16 males, 5 females) were coaching in the UK and had a mean age of 33.8 years ($s = 9.2$; range = 18-61 years). The coaches of five team sports (soccer, $n=6$; basketball, $n=3$; hockey, $n=2$; rugby, $n=1$; lacrosse, $n=1$) and eight individual sports (athletics; $n=1$; swimming, $n=1$; ice skating, $n=1$; tennis, $n=1$; squash, $n=1$; badminton, $n=1$; kayaking, $n=1$;

skiing, n=1) were represented in this study. The coaches held National Governing Body (NGB) qualifications (Level 1, n=4; Level 2, n=5; Level 3, n=4; Level 4, n=3; Level 5, n=5) and were required to be currently coaching in their sport. According to Lyle [34], the level of coaching can be categorized in the following manner; novice (Level 1 & 2); developmental (Level 3), or elite (Level 4 & 5). For the purpose of this research, the definition of ‘coaches’ will be that used by Market Opinion Research International (MORI) when carrying out their research for *Sports Coaching in the UK* [35]. This covered all coaching activity, from informally organized to elite: “Any individual that is involved in providing coaching.” As this was an inclusive definition of coaching, there were no inclusion or exclusion criteria, except that all of the coaches were actively coaching at the time of the interviews. These coaches had recently participated in coach education and signified their interest and availability for interview, by completing a form requesting further coaching information. They were then purposefully sampled on the basis of their sport, their level of engagement and length of time in current coaching practice. All participants volunteered for this study and signed informed consent forms prior to the start of the interviews. This research was undertaken following the ethical guidelines of the University of Edinburgh.

Data Collection

In total, twenty-one separate, semi-structured individual interviews were conducted, one with each of the coaches concerned in this study [36]. The interview questions were constructed by the lead researcher in line with Hill, Le Grange and Newmark [37]. Pilot interviews were conducted with three team sport coaches with varying levels of experience and qualifications (Novice, n=1; Developmental, n=1; Elite, n=1) [34]. This resulted in the development of an interview guide that included three sections, demographic information; mechanisms for coach

feedback, and summary and final comments. Questions included feedback sources, how feedback was integrated into coaching and evidence of effectiveness.

All of the interviews for both the pilot study and the major study were conducted in a place of each coach's choosing at a time that was most convenient to them. The interviews were carried out and digitally recorded in an area free from distraction. The interviews lasted between 19 and 140 minutes (Mean = 79.1minutes; SD=±15minutes). The discrepancy between the times of the interviews reflected the depth to which the coaches were able to discuss and engage with many coaching concepts, such as the critical thinking skills of reflection and problem solving.

Data Analysis

The purpose of the data analysis was to interpret and attempt to understand the methods by which coaches gain feedback in order to progress their practice. Interviews were analyzed using HyperRESEARCH qualitative data analysis software package [38], which enabled the coding, retrieval, theory building, and analyses of the collected data. HyperRESEARCH is a computer-assisted software program for analyzing qualitative data which allows a researcher to generate a theoretical framework inductively from their data [38].

The results generated by HyperRESEARCH highlighted the key points raised by all of the coaches but failed to adequately represent the richness and depth of the information. The use of a rich description, such as quotations, establishes credibility and allows the use of a constructionist perspective to both 'characterize' the coaches and provide detail about their coaching feedback [39]. The data were also inductively analyzed to interpret the meaning of the phrases used by coaches in response to questions [40]. This process involved categorizing raw verbal data into meaningful themes that emerged from the interviews [41]. The primary researcher coded the raw data themes from which first-order themes emerged. Second-order themes were then identified

and the process continued until the raw data were exhausted [40]. The other two researchers also examined the interview text; independently grouped the data into first and second-order themes and inconsistencies were discussed until agreement was reached. To ensure the integrity of the subsequent categorization of the inductive construction of the coaches' meaning and their collective voice throughout the study, the interviewees were progressively given opportunities to review the researchers' interpretation of the data from their interviews [42, 43]. At various stages throughout the interview process, the interviewer provided a summary of the coaches' views to ensure clarity, understanding and intention. In this way the findings were given credibility through the theoretical framework and richness through the use of direct quotations.

Insert Table 1 about here

Table 1 shows the themes that the novice coaches (Levels 1 and 2) deemed important for gaining feedback. These coaches, with one exception, had all coached for less than two years.

Insert Table 2 about here

Table 2 shows the themes considered crucial to the feedback of elite coaches. These coaches had all coached continuously for a minimum of ten years. Please note that in both tables the number presented in parenthesis is the number of times that a particular raw data theme was mentioned. Themes were also developed for the Level 3 coaches participating in this study. These have not been included in tabular form but are discussed in the next section.

Findings and Discussion

In total, 730 raw data themes emerged. These developed into four distinct dimensions that characterized the feedback mechanisms of coaches. These were: networks; players/participants; critical thinking skills; and support systems. The findings are reported using the medium of direct quotations, which highlight the richness of the information and facilitate a deeper understanding of the area being investigated.

Networks

Two of the novice coaches considered they were in the fortunate position of coaching with other people who were able to provide some form of feedback. The level of feedback they received appeared to vary considerably between the two, with a Level 1 basketball coach saying:

Well, because we work in twos so we kind of chat about it – this went well, this didn't go well.

Whereas a hockey coach at Level 2 recollected:

The people that coach with me will tend to occasionally observe and talk about it.

What's working, what's not working - we discuss these things.

The basketball coach was in the fortunate position of coaching with others and receiving feedback on an ongoing basis as opposed to the hockey coach who received a much less feedback. The Level 4 squash coach portrayed the feedback he received in a similar fashion, saying:

From other coaches. I've worked at the performance side, so yes, there are other coaches involved and so we'll discuss on different squad sessions and certainly that's another way I will get feedback from other performance coaches.

A national skiing coach, qualified at Level 5, explained how he had constructed his network of peers, other coaches and significant others, saying:

My support network that I count upon consists of a number of people: one of my support staff who works with me. Another fulfils the role of head coach at the club that I work at

1 *and works with me quite a lot and is also a parent of one of the athletes, who I coach.*

2 *We probably speak to one another at least every second day and elicit informal feedback*
 3 *by that process.*

4 Such an engagement with a network of fellow elite level coaches would unquestionably be
 5 of tremendous value to a coach and highlights a key difference between these elite and novice
 6 coaches. As previously mentioned, the novice coaches in this study used a variety of sources to
 7 gain feedback but generally it tended to be gleaned from their players and other novice coaches;
 8 their networks tended to be less developed in terms of objectivity (Table 1). The elite ski coach
 9 discussed the high level of constructive and contextually relevant feedback he received from his
 10 support network. This implies that he was able to construct meaning in practical ways to improve
 11 his practice [44]. Such informal learning mechanisms allow knowledge to be considered,
 12 developed and synthesized [45]. Table 2 demonstrates that the elite coaches (Level 4 & 5)
 13 developed networks of more informed individuals and were thus able to make greater use of these
 14 associations than the novice coaches. These networks, made up of peers, significant-others and
 15 mentors, were clearly superior to those of coaches at Level 1 and 2. The effect is circular, with
 16 experience comes an appreciation of the importance of networking, which in turn adds to their
 17 competence and enhances their confidence to be able to utilize their network of contacts to support
 18 their coaching practice and development. This type of network tends to develop over a coach's
 19 career, however the establishment of these support networks depends very much on the availability
 20 of other coaches with whom the coach might interact. Other considerations can be contextual
 21 factors particular to specific sports and commitment levels of both coaches and participants, as
 22 well as the ad hoc nature of some of these networks [46, 47, 48].

23 Players/Participants

Feedback as Lyle [34] maintained is an essential skill in coaching, and there are many techniques and guidelines for giving and receiving constructive feedback. The coaches in this study all indicated that they believed players and participants played a major role in the provision of feedback to their coaches and saw it as a direct part of a system of reviewing their own professional practice. The novice coaches all embraced the notion of feedback however the majority (n=7) felt that they were only able to use, or needed to use, feedback from their athletes largely because they thought that there was no-one else available (Table 1). The novice coaches in this study had little experience or knowledge of other feedback sources. A Level 1 hockey coach described her method of gaining feedback as follows:

At the end of the group, I generally get all the kids in and ask them what they enjoyed most, what they didn't enjoy, what part they might like to do next week and stuff like that.

Another Level 1 team sport coach (football) had similar experiences, saying what he did was:

Try and bring them in at the end and go over what we did today - make sure they enjoyed it and stuff like that. 4 and 5 year olds are generally quite honest.

The belief that children, especially those under the age of six, could give specific feedback to coaches was predominant in this group of Level 1 and 2 coaches. Feedback from children, as mentioned above, while honest, could be considered unsophisticated and uninformative in directing coach's actions. It certainly may not fulfil the constructive element mentioned earlier [27], although children would certainly be able to pinpoint the aspects they enjoyed. So while this feedback may give the coach a superficial understanding of participant views it may not enable the coach to make changes to practice, organisation or behaviour. Coaching context, coaching knowledge and coach education have been linked to coaching effectiveness and whether these

novice coaches possess sufficient knowledge and skills to utilize this feedback effectively is open to debate [49]. However, Mallett and Côté (2006) suggested using athletes' feedback as a catalyst for helping coaches reflect and evaluate their practice [50]. This was further emphasized by a Level 2 ice skating coach, who thought:

The kids will tell you, first of all, they do tell you. I asked, "Are you bored?" and they said "Well that was a bit boring". They're definitely quick to tell you whether they're enjoying it or not.

The primary motivation here for both coaches and participants was the notion of enjoyment, which may not be the most appropriate source of effective feedback. Within this group of coaches there was no consensus as to what constituted enjoyment, whether it involved learning, achievement or competition. Research into the concept of enjoyment within the 7-12 year old age group has suggested that the coach is a key factor, particularly the environment that they create within practice sessions [51], perhaps regardless of feedback.

The Level 3 rugby coach still approached his players for feedback, however he considered he was in the fortunate position of accessing a number of experienced players. The fact these players were adults proved to be highly significant to him as he explained:

It's like a conversation but I take on board that information and try to make changes. I speak to the captain and the vice-captain as well, who're very good at putting across their feelings and they've got a nice feel for the session as well as a lot of responsibility within that as well. In women's rugby, I coach two teams and my girlfriend plays for them both, so I get the feedback from her.

Although the feedback provided to this coach was informal, there was no reason to doubt that all the feedback providers, players and team captains, were able to provide substantive information regarding the session format and content. The level of feedback was more

sophisticated given the length of time these players had been involved in the sport, their understanding of practice and competition requirements and the nuances of the coach/performer relationship [52, 53]. What is debatable however, are the validity and merits of any feedback players are able to give in relation to the enhancement of a coaching performance.

Ericsson, Krampe & Tesch-Römer [19] considered informative feedback to be crucial in the attainment of expertise but although these coaches receive regular feedback it is questionable as to whether this feedback is either informative or valid. Coaches and players alike must be aware of the 'power' issue, most prevalent in performance or high performance sport, especially if the coach is seeking constructive feedback from a number of sources [31]. Feedback about coaching performance, particularly from a knowledgeable and experienced individual is an essential element of the process of developing expertise and, is critical particularly in facilitating coaches' transitions to higher levels of accreditation [54]. However, both Cushion [55] and Gearity [56] have suggested that athletes prefer coaches who display coaching behaviours that suit their learning style. Therefore the perceptions of athletes providing feedback could reflect their preferences for the learning style favoured by their coach.

The Level 4 tennis coach gave details of his feedback from players:

You're going to take them through the lesson, ask questions on specific parts of the lesson. This obviously invites feedback, or checking what knowledge they've taken in. It also shows what you've put across - have they taken it onboard?

An elite football coach, working in the professional environment, who could be classified as an expert, outlined his feedback strategies, saying:

To be honest I do ask the players, I don't see it specifically as my feedback but we do a debrief every Monday. We don't debrief after the game. We leave it to the Monday and then we bring up things like 'is the warm up too long', 'is it too short'?

1 *We'll ask about every area of the training sessions specifically and we'll adapt it to*
2 *suit areas that we think we maybe need.*

3
4 Similar to the other coaches who worked with experienced, adult players these tennis and soccer
5 coaches used players to elicit feedback regarding the effectiveness of their coaching strategies. As
6 this suggests, coaches tend to utilize informal sources to gain feedback and it has been shown that
7 these informal pathways have a high impact on coach learning [57]. However, the coach needs to
8 ensure that these sources of feedback are valid and they are not merely verifying what is already
9 known, with no real awareness of validity. For example, players tend to enjoy practicing skills in
10 which they are already proficient, hence the resultant enjoyment and sense of satisfaction leading
11 to positive feedback to the coach. Does this make the feedback valid, objective or constructive?

12 Critical Thinking Skills

13 Critical thinking can be defined as the ability to think clearly and logically and usually includes the
14 skills of self-reflection, problem solving and reasoning. Mason [58] suggests that critical thinking
15 can range from asking difficult questions to having a critical attitude. Moon's work [59, 60] has
16 been widely used within coaching to explain the mechanisms of coach learning and their
17 development of essential critical thinking skills. Consequently, researchers have provided
18 theoretically grounded suggestions for coach education courses on how to construct meaningful
19 learning experiences. Yet, coaching research has failed to provide a theoretical explanation of how
20 and why learning occurs within coach education courses.

21 Feedback is essential to critical thinking and the ongoing process of self-development with
22 studies suggesting that when coaches have been exposed to the principles of reflective practice
23 they are more likely to consider their coaching practice in a wider context [11]. Consideration of
24 all valid feedback is vital when contemplating self-reflection and the more sources used and
25 viewpoints considered by a coach the more productive the feedback is likely to be. The Level 2

1 hockey coach highlighted the importance of watching players practice plus the use of questioning
2 to check learning and understanding:

3 *I don't use any formal system but you tend to see through observation,*
4 *for example, if they're doing what they're supposed to. You may also*
5 *question them, assess whether what you've been saying is embedded.*

6 The Level 3 coaches in this study felt that critical thinking was essential to their
7 development as coaches and to the improvement of their performers. The majority (n=3) of these
8 coaches had regular methods that they used to gain feedback from a variety of sources. A Level 3
9 soccer coach clearly linked many of his feedback mechanisms to his reflective practice, stating:

10 *I get feedback through just evaluating my sessions. For example, looking at my*
11 *sessions, see what I feel has gone right and wrong, reflecting on what*
12 *I think should be done. Also, what could have been done better and even*
13 *the things that have been done in the session that I could say 'Right, I've*
14 *done it this way, now I know I need to do this, do that to make it better*
15 *next time'.*

16 The notion of a third party, whether a critical friend or a mentor is clearly still resisted by many
17 of the coaches in this study. It was clear that the Level 4 and Level 5 coaches had identified this
18 as one of a number of mechanisms they used to gain feedback on their coaching. They also
19 considered that as they received feedback from so many sources, it was constant. The elite
20 kayaking coach summarized this point of view, stating:

21 *Feedback is usually continuous. As a coach you get feedback all the time.*
22 *The whole thing about getting feedback is that you should know how*
23 *you're doing from the moment you start the process so that you can reflect*
24 *and monitor your progress, not just at the end of a session.*

Knowledge can be acquired outside of formal learning settings enabling coaches to interpret their coaching practice and develop knowledge through this authentic learning environment rather than formal coach education courses [60]. Interestingly, when discussing feedback none of the coaches in this study mentioned formal coach education courses as a mechanism for gaining feedback on their coaching practice, although a caveat may be needed here. Coaches may not have considered formal coach education courses as a legitimate feedback source as they tended to value the sources they felt they could develop themselves, such as reflection and problem-solving.

Coaches can use problem-solving techniques as an aid to coaching effectiveness; however, this study demonstrated that this technique was only used by the elite coaches. For example, the elite basketball coach considered that:

If coaching is about developing expertise in some way, we haven't got much time, the guys have got an expectation that when they turn up, "The coach has all the answers". That means I need to know what the problems are and be able to solve them – quickly.

The kayaking coach also considered problem-solving as a feedback source, saying:

This course really encouraged problem-solving because you were treated as being equal with your peers who were assessing you and sharing your education with them rather than them showing/teaching you how to coach. We got involved in discussions about how to coach, what coaching was about, so it was a little bit more creative and imaginative than usual. The situations involving problem-solving linked to the solutions really well.

This method of creating situations to enable feedback through reflection and problem-solving requires a high level of facilitative skills from the coach developer. This kayaking coach was the only coach in this study to attribute the involvement of the coach developer and the other coach learners as a key source in solving problems through discussion and debate. However, it is essential that coach developers have the ability to negotiate the reflective process by clearly understanding coaches' backgrounds and coaching needs [61]. This poses questions as to where coaches, at any level of development, acquire these problem-solving skills. Research suggests that more attention

should also be focused on metacognitive skills, including problem-solving strategies, when trying to attain expertise in coaching [62]. Trudel and Gilbert (2013) suggested that strategies such as reflecting on typical coaching issues and critical incidents, self-analysis using video and systematic observation techniques, and increasing access to mentors and peer were influential in developing coaches [63].

Support Systems

Support systems in this instance referred to the assistance available to a coach from either their particular coaching environment, for example a club, or the more formal organized provision from sports organizations, either local or national. In some cases the support system came from the sport science side, for example strength and conditioning coaches or performance analysts and in other cases the theme highlighted how isolated some coaches felt within their own coaching context, perhaps leading some to develop the networks discussed earlier.

Some coaches felt that within their coaching environment there was little evidence of support. A novice soccer coach admitted: *'I've not really had feedback.'* He then continued to add: *'I don't really think that I need it at my level of coaching.'* Few coaches (n=2) in this study had any experience of formal support systems that encouraged feedback within their coaching practice. A national level lacrosse coach stated:

Your learning is going to be limited if you are on your own because you've got limited sources of feedback on what's gone on. These players recognize that you're on your own so they're hardly going to tell you something negative because there might be nobody to coach them the next time.

Coaches have identified the input and support from a coaching organization as crucial in their development. The Level 2 hockey coach had a much more positive view of the support available to him in his coaching environment, thinking:

1 *We've had a couple of stabs at putting together a coaching plan and getting someone*
2 *to oversee - a coaching manager or something like that - to oversee the qualification*
3 *stages that people are at, how our coaching development plan is coming on.*

4 A highly qualified coach from the individual sport of skiing also had an encouraging view of the
5 performance feedback he received, supporting the efficacy of their programmes saying:

6 *In terms of whether it's effective or not, if you take strength and conditioning, there's*
7 *some empirical data there that says I'm better than I was last week or 2 weeks ago,*
8 *or a month ago or 6 months ago and that's documented. That's feedback for me –*
9 *my programme is working.*

10
11 This and previous comments highlight that many coaches assumed that if their performers
12 are improving then their coaching must be effective, therefore this was positive feedback. Indeed,
13 considerable debate emerged as to whether or not any productive support systems which offered
14 feedback to coaches as they sought to progress, whatever their level, even existed at all. This view
15 was expressed by the lacrosse coach who thought:

16 *As a coach it can be quite lonely being the only coach with a big team because you*
17 *can't discuss what you're going to do with your team and you don't get feedback from*
18 *anyone else but the team. That's quite difficult to do.*

19
20 Consistent with this comment from the lacrosse coach, none of the elite coaches explicitly
21 specified the nature of the feedback they received, and thus were apparently no more skilled in this
22 area of their practice than the Level 1 and 2 coaches. However, the novice coaches were more one-
23 dimensional in the delivery, as highlighted by this Level 1 soccer coach who considered that he
24 could only understand and appreciate feedback in one format, saying: *'It has to be verbal.'* The
25 novice coaches also tended to focus more on the lack of feedback opportunities and, in some cases,
26 the complete lack of feedback mechanisms. The elite basketball coach, reflected on various types
27 of feedback that he had received over the years, stating:

1 *Typically in the logbook type approach, you've got to give examples of so many*
2 *types of sessions and we want you to evaluate what you've done but even there*
3 *I'm not so sure there is a scheme for doing that. They (logbooks) tend to be high*
4 *on the procedural side and low on the reflective side - they just assume it's going*
5 *to happen and you'll do it.*

6 This elite basketball coach had been involved in coaching for over 20 years and had
7 experienced a variety of approaches within coach education but highlighted a key point
8 within the logbook approach. He considered that coach developers were trying to
9 encourage the reflective process by having coaches' complete the logbook. However he
10 considered that there were two assumptions being made, firstly, that the coaches
11 understood how to reflect and secondly, that the coaches would actually complete the
12 reflective tasks.

13 Similarly, the novice coaches were very concerned about the feedback from the parents
14 who observed their sessions. Holt and Black [64] theorized that parents' opinions on youth sport
15 were shaped by their parenting approach, which would have an impact on their expectations of the
16 child and by inference, the coach. These coaches did not view the parents' viewpoints as
17 necessarily supportive or encouraging.

18 A novice basketball coach commented:

19 *Right now, I'm trying to ask players on the team - that's relatively effective they're*
20 *rather nice – not like the parents. Parents watch you all the time – trying to find*
21 *problems and asking why you did something.*

22 This perspective was shared by a Level 2 ice skating coach who thought:

23 *The parents are very quick to say if something's not right. They're watching all the*
24 *time and let you know if it's boring or repetitive or they're not [the children] enjoying*
25 *the session.*

26 Although this feedback was relatively immediate, utilizing parents as credible and reliable
27 sources may be problematic. However having to answer questions and defend session content
28 sources may be problematic. However having to answer questions and defend session content

and approach may give these coaches other sources of feedback if they possess the necessary skills to take advantage of the information, once the credibility and reliability has been assessed. This may help them develop reflective skills, critical to coaching expertise [65].

Conclusion

The aim of this study was to determine the formal and informal mechanisms by which coaches gained feedback on their coaching practice. It was found that there were four distinct dimensions that characterized the feedback mechanisms adopted by coaches. These were: networks; players/participants; critical thinking skills; and support systems. Although this study attempted to establish differences between designated expert and novice coaches, few distinctions were evident. Those coaches who had been coaching long enough for sufficient years to establish networks of like-minded coaches seemed to be more open to constructive feedback. Similarly, novice coaches appeared to receive feedback from non-reliable sources, for example, parents and young participants, in lieu of more informed sources.

Feedback is a necessary component at all levels of coaching and its significance and centrality in the coaching process should not be disregarded at the basic levels. Nor should the importance placed on a self-generated network of peers by the expert coaches be ignored: such networks should possibly be formalized to enable novice coaches to benefit from more informed sources. This study demonstrates the need for the sources of feedback available to coaches to be offered in a variety of formats, all designed to elicit the development of coaching practice.

The results of this study suggest the detail of this feedback should vary according to the level of coaching accreditation involved and the nature and context of the particular sport. For example, although critical thinking skills are distinct dimensions for both novice and expert coaches, the expert coaches rely on reflection, problem-solving as well as several sources of

1 coaching knowledge to gain feedback, rather than the more restricted dimensions identified by
2 their less experienced counterparts. All of the coaches in this study appeared to consider most
3 feedback as validation of their coaching methods, rather than another aspect of their practice that
4 required evaluation and critical review.

5 A critical review of coaching practice, similar to that which is embraced in teaching
6 practice, incorporating peer-review, mentoring and critical thinking skills should be a core element
7 of the coach education process. The implementation of such a process would not be without
8 difficulties and should be instituted using well-researched mechanisms that enable the provisions
9 of objective and informative feedback to sport coaches about their practice with the ultimate aim
10 being to support the development of coaches at *all* stages of their coaching careers.

11

REFERENCES

1. Lyle J, Jolly S and North J. The learning formats of coach education materials. *Int J Coach Sci* 2010; 1: 35-49.
2. Mahoney AJ, Devonport T and Lane A. The effects of interval feedback on the self-efficacy of netball umpires. *J Sports Sci Med* 2008; 7: 39-46.
3. O'Donoghue P. The use of feedback videos in sport. *Int J Perf* 2006; 6: 1-15.
4. Wang J. Innovative and advanced training approaches for feedback-based sports skills. *Int J Phy Ed* 2005; 42: 80-85
5. Costa A.L. *The school as a home for the mind: Creating mindful curriculum, instruction, and dialogue*. 2nd ed. California: Corwin Press, 2007.
6. Smith R E, Smoll EL and Barnett N. Reduction of children's sport performance anxiety through social support and stress-reduction training for coaches. *J Appl Dev Psychol* 1995; 16: 125-142.
7. Nicol DJ and Macfarlane-Dick D. Formative assessment and self-regulated learning: A model and seven principles of good feedback practice *Stud High Ed* 2006; 31: 199-218.
8. Patterson J, Lee T and Balmforth D. Organizing practice: The interaction of repetition and cognitive effort for skilled performance. In: Farrow D (ed) *Developing sport expertise: Researchers and coaches put theory into practice*. London: Routledge, 2008.
9. Kidman L and Carlson TB. An action research process to change coaching behaviours. *Avante* 1998; 4: 100-117.
10. Nash C. Development of a mentoring system within coaching practice. *J Hosp Leis Sp Tour Ed* 2004; 2: 36-47.
11. Knowles Z, Borrie A and Telfer H. Towards the reflective sports coach: Issues of context, education and application. *Ergonomics* 2005; 48: 11-14 and 1711-1720.
12. Sousa C, Smith RE and Cruz J. An individualized behavioral goal-setting program for coaches. *J Clin Sp Psychol* 2008; 2: 258-278.
13. Horton S. and Deakin JM. Optimizing the practice environment: The role of the expert coach. *J Sp Ex Psychology* 2003; 25: S71
14. Williams JH. Use of social media to communicate sport science research. *Int J Sports Sci Coach* 2011; 6: 295-301.
15. Zhan J. and Chai, G. The Track and Field Coaches' Self-learning and Ability Training in the Internet Learning Environment. *J Beijing Sp Univ* 2007; 30: 1684-1687.
16. King, A., Enhancing Peer Interaction and Learning in the Classroom through Reciprocal Questioning. *Am Educ Res J* 1990; 27: 664-687
17. Gould D, Greenleaf C, Chung Y and Guinan D. A survey of U.S. Atlanta and Nagano olympians: Variables perceived to influence performance. *Res Q Exerc Sport* 2002; 73: 175-187.
18. Kluger AN and DeNisi A. The effects of feedback interventions on performance: A historical review, a meta-analysis, and a preliminary feedback theory. *Psychol Bull* 1996; 119: 254-284.

19. Ericsson KA, Krampe RT and Tesch-Römer C. The role of deliberate practice in the development of expertise. *Psychol Rev* 1993; 100: 363-406.
20. Nash C and Sproule J. Career development of expert coaches. *Int J Sports Sci Coach* 2009; 4: 121-138.
21. Hattie J and Timperley H. The power of feedback. *Rev Educ Res* 2007; 77: 81-112.
22. Scheeler MC, Ruhl KL and McAfee JK. Providing performance feedback to teachers: A review. *Teach Educ Spec Educ* 2004; 27: 396-407.
23. Chi MTH, Bassok M, Lewis MW, Reiman, P and Glaser R. Self-explanations: How students study and use examples in learning to solve problems. *Cognit Sci*, 1989; 13: 145–182.
24. Fairbrother JT. *Fundamentals of Motor Behavior*. Champaign, Illinois: Human Kinetics, 2010.
25. Metcalfe J, Kornell N and Finn B. Delayed versus immediate feedback in children's and adults' vocabulary learning. *Mem Cognit* 2009; 37: 1077-1087.
26. Shute VJ. Focus on formative feedback. *Rev Educ Res* 2008; 78: 153–189.
27. Côté J. The development of coaching knowledge. *Int J Sports Sci Coach* 2006; 1: 217-222.
28. Knowles Z, Tyler G, Gilbourne D. and Eubank M. Reflecting on reflection: Exploring the practice of sports coaching graduates. *Reflect Prac* 2006; 7: 163 – 179
29. Wrisberg CA. *Sport Skill Instruction for Coaches*. Champaign, IL, Human Kinetics; 2007.
30. Wilson LM, Bloom GA and Harvey WJ. Sources of knowledge acquisition: Perspectives of the high school teacher/coach. *Phys Educ Sport Pedagogy* 2010; 15: 383-400.
31. Cruickshank A, Collins D, and Minten S. Culture change in a professional sports team: Shaping environmental contexts and regulating power *Int J Sports Sci Coach* 2013; 8: 271-290.
32. Denison J and Jowett S. Expanding the interpersonal dimension: Closeness in the coach-athlete relationship. *Int J Sports Sci Coach* 2007, 2(4), 497-512.
33. Martindale, R., and Nash, C., Sport Science Relevance and Application: Perceptions of UK Coaches. *J Sports Sci* 2012; 31:807-819.
34. Lyle J. *Sports coaching concepts: A framework for coaching behaviour*. London; Routledge: 2002.
35. MORI. *Sports coaching in the UK*. Leeds; Sports Coach UK: 2004.
36. Gratton C and Jones I. *Research methods for sports studies*. London and New York,; Routledge: 2004.
37. Hill F, Le Grange L and Newmark R. The use of qualitative and quantitative methodologies in a special educational needs study. *Int J Spec Educ*. 2003; 18: 62-72.
38. Hesse-Biber, S. and Dupuis, P., Testing Hypotheses on Qualitative Data: The Use of HyperRESEARCH Computer-Assisted Software. *Soc Sci Comput Rev*. 2000; 18: 320-328.
39. Creswell, J. W., and Miller, D. L., Determining Validity in Qualitative Inquiry. *Theory Pract* 2000; 39: 124-130.

- 1 40. Côté J, Salmela J, Trudel P, Baria A and Russell S. The coaching model: A grounded
2 assessment of expert gymnastic coaches' knowledge, *J Sport Exer Psychol* 1995; 2: 1-17.
- 3 41. Patton M. *Qualitative research and evaluation methods*. Thousand Oaks CA; Sage: 2001.
- 4 42. Koch T. Establishing rigour in qualitative research: The decision trail. *J Adv Nurs*. 1994;
5 19: 976-986.
- 6 43. Guba EG and Lincoln YS. *Fourth generation evaluation*. Newbury Park CA; Sage: 1989.
- 7 44. Vallée CN and Bloom GA. Building a successful university program: Key and common
8 elements of expert coaches. *J Appl Sport Psychol* 2005; 17: 179 – 196.
- 9 45. Nash C and Sproule J. Career development of expert coaches *Int J Sports Sci Coach* 2009;
10 4: 121-138.
- 11 46. Nash C and Sproule J. Insights into experiences: Reflections of an expert and novice
12 coach. *Int J Sports Sci Coach* 2011; 6: 149-162.
- 13 47. Gauthier A, Schinke R and Pickard P. Coaching in Northern Canadian communities:
14 Reflections of elite coaches. *J Sports Sci Med* 2005; 4: 113-123.
- 15 48. Occhino J, Mallett C and Rynne S. Dynamic social networks in high performance football
16 coaching. *Phys Educ Sport Pedagogy*. 2013; 18: 90-102.
- 17 49. Sullivan P, Paquette K, Holt N and Bloom G. The relation of coaching context and coach
18 education to coaching efficacy and perceived leadership behaviors in youth sport. *Sport*
19 *Psychol*. 2012; 26: 122-134.
- 20 50. Mallett C and Cote J. Beyond winning and losing: Guidelines for evaluating high
21 performance coaches. *Sport Psychol*. 2006; 20: 213-221.
- 22 51. McCarthy PJ and Jones MV. A qualitative study of sport enjoyment in the sampling
23 years. *Sport Psychol*. 2007; 21: 400-416.
- 24 52. Bailey R, Cope EJ and Pearce G. Why do children take part in, and remain involved in
25 sport? A literature review and discussion of implications for sports coaches. *Int J Coach*
26 *Sci*. 2013; 7: 56-75.
- 27 53. Purdy LG and Jones RL. Choppy waters: Elite rowers' perceptions of coaching. *Sociol*
28 *Sport J*. 2011; 28: 329-346.
- 29 54. Bennie A and O'Connor D. Coach-athlete relationships: A qualitative study of professional
30 sport teams in Australia. *Int J Sport Health Sci*. 2012: 1058-64.
- 31 55. Cushion C, Ford PR and Williams A. Coach behaviours and practice structures in youth
32 soccer: Implications for talent development. *J Sports Sci*. 2012; 30: 1631-1641.
- 33 56. Gearity BT. Poor teaching by the coach: A phenomenological description from athletes'
34 experience of poor coaching. *Phys Educ Sport Pedagogy*. 2012; 17: 79-96
- 35 57. Vella SA, Crowe TP and Oades LG. Increasing the effectiveness of formal coach
36 education: Evidence of a parallel process. *Int J Sports Sci Coach*. 2013; 8: 417
- 37 58. Mason M. (Ed). *Critical thinking and learning*. Oxford: Blackwell Publishing: 2008.
- 38 59. Moon J. *Critical thinking: An exploration of theory and practice*. London: Routledge: 2007
- 39 60. Werthner P and Trudel P. A new theoretical perspective for understanding how coaches
40 learn to coach. *Sport Psychol*. 2006; 20: 198-212.

- 1 61. Gilbert W and Trudel P. Learning to coach through experience: Reflection in model youth
2 sport coaches. *J Teach Phys Educ.* 2001; 21: 16-34.
- 3 62. Hagemann N, Strauss B and Büsch D. The complex problem-solving competence of team
4 coaches. *Psychol Sport Ex* 2008; 9: 301-317.
- 5 63. Gilbert W and Trudel P. The role of deliberate practice in becoming an expert coach: Part
6 2 - Reflection. *Olympic Coach*, 2013, 24(1):35-44.
- 7 64. Holt, N.L. and Black, D.E., *Parenting* Styles and Specific *Parenting* Strategies in Youth
8 Sport. *J Sport Ex Psychol.* 2007; 29: S170-172.
- 9 65. Irwin G, Hanton S and Kerwin D. Reflective practice and the origins of elite coaching
10 knowledge. *Reflect Pract.* 2006; 5: 425-442.
- 11
- 12
- 13
- 14

1

Raw Data Theme	Ist Order Theme	2 nd Order Theme	General Dimension
Work in twos (27)	Peers	Networks	Feedback Mechanisms of Novice Coaches
buddy coaching system (23)			
feedback from other coaches (3)	Other Staff / Significant Others		
elicit informal feedback (1)			
response from children (48)	Observation of Participants	Participants	
if they have had fun (9)			
evidence of permanency (1)			
ask players on the team (4)	Feedback from Participants		
checking what knowledge they've taken in (1)			
ask questions on specific points (2)			
questionnaire at the end of each block (3)			
if they come back, that's feedback because they've enjoyed it (2)			
Knowledge (3)	Knowledge	Critical Thinking Skills	
experience as player (4)	Evaluation		
session evaluations (24)			
verbal feedback (3)			
no feedback (5)	Lack of Support	Support Systems	
limited sources of feedback (4)			
no formal feedback system (3)			
parents tell you (20)	Subjective Feedback		
video (2)			

2 Table 1: Feedback Mechanisms of Level 1 and Level 2 Coaches

1

Raw Data Theme	Ist Order Theme	2 nd Order Theme	General Dimension
Always someone who knows more than you (7)	Mentors	Networks	Feedback Mechanisms of Expert Coaches
Network of friends and coaches (49)	Peers		
get feedback from other performance coaches (32)			
feedback from other coaches (17)	Other Staff / Significant Others		
elicit informal feedback (12)			
feedback from own coaching staff (13)			
evidence of improvement (9)	Observation of Players		
behaviour change (10)			
evidence of permanency (7)			
player’s demeanour (8)			
ask players on the team (33)	Feedback from Players		
checking what knowledge they've taken in (14)			
ask questions on specific points (12)			
questionnaire at the end of each block (1)			
knowledge (22)	Knowledge	Critical Thinking Skills	
experience as coach (34)			
experience as player (16)	Reflection		
session evaluations (3)			
whether it's effective or not (2)			
there's always a but in there (2)	Problem Solving		
problem solving (29)			
detail is important (5)			
response to mistakes (2)	Lack of Support		
no formal feedback system (18)			

it can be quite lonely (2)		Support Systems	
coaching development plan (1)	Objective Feedback		
psychological profiling (2)			
empirical data (1)			
video analysis (2)			

Table 2: Feedback Mechanisms of Level 4 and Level 5 Coaches